

AMENDMENTS TO THE SPECIFICATION

Please amend paragraphs [017], [047], [048], [049] and [064] as follow:

[017] The embodiments of the present invention describe force transfer structures that direct contraction and expansion forces of the heart's ventricles to invoke a pulsatile motion of other anatomic structures such as the atria, the aorta, the pulmonary artery, or other anatomy to influence and modify cardiac output. That is, the embodiments allow the contractile and expansion energies of the heart to be transferred to the atria, aorta, the pulmonary artery, or other anatomy improving the efficiency of pumping thereby improving cardiac output. Another potential benefit of these force transfer structures is that they may also work in concert to provide reinforcement against myocardial stretch (or infarct expansion). Especially in this regard, the present invention is advantageously employed in connection with the ~~featured~~ features described in U.S. Patent Application Atty. Docket No. EXMA-001, entitled "System for Heart Treatment," filed on even date herewith that claims benefit to U.S. Provisional Application Serial No. 60/329,694, entitled "Percutaneous Cardiac Support Structures and Deployment Means," filed October 16, 2001 and Provisional Application Serial No. 60/368,918 entitled "Percutaneous Vascular Tensioning Devices and Methods," filed March 29, 2002

[047] The ends of the force transfer structure 200 in Figure 4A are secured together to comprise a complete wrapped structure thereby forming a three-loop or triple loop structure as shown. The free ends of the force transfer structure can incorporate ties that can be knotted together thereby defining the inherent compression placed upon the heart. Alternatively, a zip-tie ratcheting mechanism or a twist-tie feature, or similar interface, can be incorporated at the free ends to provide rapid attachment of the force transfer structure 200 and/or enable tightening the force transfer structure over time. Other attachment means can be utilized to secure free ends of the force transfer structure including adhesives, staples, ultrasonic welding, thermal bonding, suturing directly or to a metallic or polymeric cuff, combinations of these various means or other modality.

[048] As shown in Figure 4B, the force transfer structure 200 can be wound around the aorta 162 at the recipient loop 204 and have the free ends of the structure secured to opposite sides of the left ventricle 18 using anchor formations 32 to provide a bow-shaped structure. As previously stated, the dotted lines represent the structure placed along the posterior surface of the heart and the solid lines show the structure along the anterior surface. The anchor formations 32 consist of staples, barbs designed to penetrate into or through the myocardium, suture stitches, adhesive drops, or other attachment means capable of securing the force transfer structure and maintain the bond and intimate tissue contact when the implant is exposed to the anticipated stress conditions associated with applying force to the recipient loop 204 as the left ventricle 18 expands and contracts.

[049] Figure 5A shows an alternative force transfer structure 200 embodiment comprising a wire or flat ribbon tensile member 84 fabricated from a metal or biocompatible alloy formed into a source loop 202 and a recipient loop 204 with the force transmission link 206 consisting of an intersection of the tensile member 84. The tensile member 84 of the force transfer structure 200 can be embedded in a covering 218. As shown in Figure 5B, the force transfer structure 200 is wound in a figure-eight shape around the left and right ventricles 18 and 24 at a source loop 202 and around the aorta 162 at the recipient loop 204. The free ends of the force transfer structure 200 are secured together at a connection 208 such that the desired transmission of motion and energy into the aorta in response to movement of the ventricles is obtained. The connection 208 can be produced by twisting the free ends of the force transfer structure 200 (especially if the tensile member is malleable) thereby tying the ends together, knotting the free ends, using another suture, staple, clip, suture, combination of these means or other attachment means to secure the free ends, or other mechanism.

[064] Figure 15 shows a force transfer structure with the recipient loop 204 winding around both of the pulmonary artery 72 and aorta 162[[,]] As such, a three-loop or triple loop structure is provided in order to induce motion in these two anatomic structures in response to motion in the left and right ventricles 18 and 24.